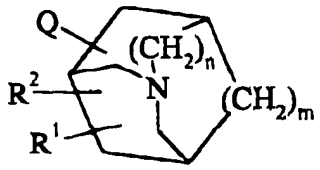
AMENDMENTS

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

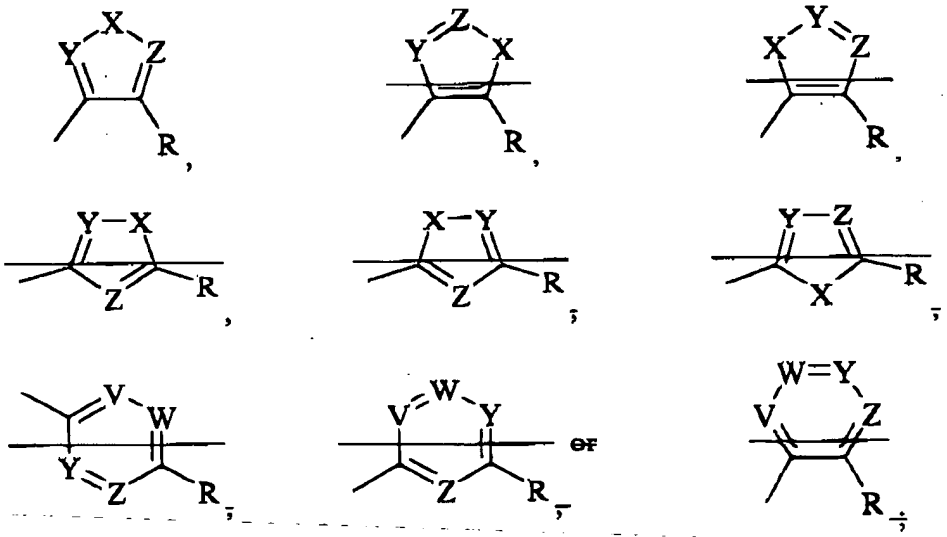
Listing of claims:

1. (currently amended) A pharmaceutical composition comprising at least one M4 selective muscarinic agonist selected from the azacyclic ring system having the formula I



I

~~including~~ and geometrical isomers, enantiomers, diastereomers, racemates, acid addition salts, salts thereof with a pharmaceutically acceptable acid, and prodrugs thereof, wherein Q is



X is ~~CH_2, NH, O or~~ S;

~~V, W,~~ Y and Z ~~independently~~ are ~~CH or~~ N;

n and m independently are ~~0, 1, 2, 3 or 4~~;

R^1 and R^2 are at any position on the azacyclic ring, including the point of attachment of the heterocycle Q, and independently are hydrogen, -OH, halogen, $-NH_2$, carboxy, straight or branched C_{1-10}-alkyl, C_{1-10}-alkenyl, or C_{1-10}-alkynyl, straight or branched C_{1-10}-alkoxy, or straight or branched C_{1-10}-alkyl substituted with –OH, -CN, -CHO, -OH, $-OR^3$, $-SR^3$, $-NH_2$, $-NHR^3$, $-NR^3R^4$, $-NO_2$, $-SOR^3$, $-SO_2R^3$, $-COR^3$, $-CO_2R^3$, $-CONH_2$, $-CONHR^3$, $-CONR^3R^4$, or $-CH=NOR^3$; or

R^1 and R^2 independently are phenyl, phenoxy, benzoyl, benzyl or benzyloxycarbonyl, each of which are unsubstituted or substituted with halogen, -CN, C_{1-10}-alkyl, C_{1-10}-alkoxy, or C_{1-10}-alkylthio;

R is hydrogen, halogen, -CN, -CHO, -OH, $-OR^3$, $-SR^3$, $-NH_2$, $-NHR^3$, $-NR^3R^4$, $-NO_2$, $-SOR^3$, $-SO_2R^3$, $-COR^3$, $-CO_2R^3$, $-CONH_2$, $-CONHR^3$, $-CONR^3R^4$, or $-CH=NOR^3$; or

R is phenyl, phenoxy, benzoyl, benzyl or benzyloxycarbonyl, each of which are unsubstituted or substituted with halogen, -CN, C_{1-15}-alkyl, C_{1-10}-alkoxy, or C_{1-10}-alkylthio; or

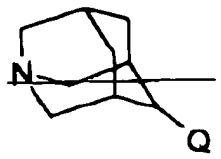
R is a 5 or 6 membered saturated, partly saturated or aromatic heterocyclic ring containing one to three heteroatoms; and

R^3 and R^4 independently are straight, branched, or cyclic C_{1-15}-alkyl, C_{2-15}-alkenyl, C_{2-15}-alkynyl, or combinations thereof, or R^3 and R^4 independently are phenyl, phenoxy, benzoyl, benzyl or benzyloxycarbonyl groups, each of which are unsubstituted or substituted with H, halogen, -CN, C_{1-15}-alkyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, or aryl; or

R^3 and R^4 independently are 5 or 6 membered saturated, partly saturated or aromatic heterocyclic rings containing one to three heteroatoms; and

further comprising one or more additional analgesics.

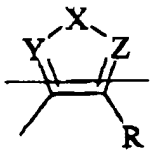
2. (currently amended) The composition according to claim 1 wherein in formula I of the M4 selective muscarinic agonist ~~n and m both are 1 and the azazyclic ring system has the structural formula:~~



II

~~wherein~~

~~Q is:~~



~~X is S,~~

~~Y and Z are N, and~~

R is OR^3 or SR^3.

3. (original) The composition according to claim 2 wherein R^3 of the M4 selective muscarinic agonist is $-CH_3$, $-CH_2CH_3$, $-CH_2CH_2CH_3$ or $-CH_2CH(CH_3)_2$.

4. (original) The composition according to claim 1 wherein the M4 selective muscarinic agonist is selected from the group consisting of

a) 3-(5-Aza-2-chlorotricyclo[3.3.1.1<3,7>]dec-2-yl)-4-chloro-1,2,5-thiadiazole;

b) 3-(5-Azatricyclo[3.3.1.1<3,7>]dec-2-yl)-4-chloro-1,2,5-thiadiazole;

c) 3-(5-azatricyclo[3.3.1.1<3,7>]dec-2-yl)-4-methoxy-1,2,5-thiadiazole;

d) 3-(5-azatricyclo[3.3.1.1<3,7>]dec-2-yl)-4-ethoxy-1,2,5-thiadiazole;

e) 3-(5-azatricyclo[3.3.1.1<3,7>]dec-2-yl)-4-propoxy-1,2,5-thiadiazole;

f) 3-(5-azatricyclo[3.3.1.1<3,7>]dec-2-yl)-4-butoxy-1,2,5-thiadiazole;

g) 3-(5-azatricyclo[3.3.1.1<3,7>]dec-2-yl)-4-(cyclopropylmethoxy)1,2,5-thiadiazole; and

h) 3-(5-azatricyclo[3.3.1.1<3,7>]dec-2-yl)-4-(2-methyl-propoxy)-1,2,5-thiadiazole;

i) 4-[4-(propylsulfanyl)-1,2,5-thiadiazol-3-yl]-1-azatricyclo[3.3.1.1<3,7>]decane hydrochloride

j) 4-[4-(methylsulfanyl)-1,2,5-thiadiazol-3-yl]-1-azatricyclo[3.3.1.1<3,7>]decane

k) 4-[4-(ethylsulfanyl)-1,2,5-thiadiazol-3-yl]-1-azatricyclo[3.3.1.1<3,7>]decane

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l) 4-[4-(butylsulfanyl)-1,2,5-thiadiazol-3-yl]-1-azatricyclo[3.3.1.1<3,7>]decane

m) 4-[4-(2-methyl-propylsulfanyl)-1,2,5-thiadiazol-3-yl]-1-azatricyclo[3.3.1.1<3,7>]decane

n) 4-[4-(cyclopropylmethylsulfanyl)-1,2,5-thiadiazol-3-yl]-1-azatricyclo[3.3.1.1<3,7>]decane.

5. (original) The composition according to claim 4 wherein the M4 selective muscarinic agonist is 4-s-[4-(propylsulfanyl)-1,2,5-thiadiazol-3-yl]-1-azatricyclo[3.3.1.1<3,7>]decane hydrochloride.

6. (original) The composition according to claim 1 further comprising a pharmaceutically acceptable carrier.

7. (original) The composition according to claim 1 wherein the additional analgesic is selected from the group of opioid analgesics, nonsteroidal anti-inflammatory drugs and other analgesics.

A1 Cont.

8. (original) The composition according to claim 7 wherein the additional analgesic is an opioid analgesic.

9. (original) The composition according to claim 8 wherein the opioid analgesic is selected from the group of morphine and codeine.

10. (original) The composition according to claim 7 wherein the additional analgesic is a non-steroidal anti-inflammatory drug.

11. (original) The composition according to claim 10 wherein the non-steroidal anti-inflammatory drug is selected from the group of acetaminophen, ibuprofen, celoxicib and refoxicib.

12. (original) The composition according to claim 7 wherein the additional analgesic is selected from the group of nicotinic agonists, NMDA antagonists, epileptics and alpha adrenoceptor agonists.

13. (withdrawn) A method of inducing analgesia, the method comprising co-administration of at least one M4 selective muscarinic agonist selected from the azacyclic ring system having the formula I

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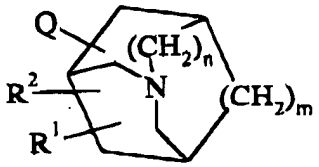

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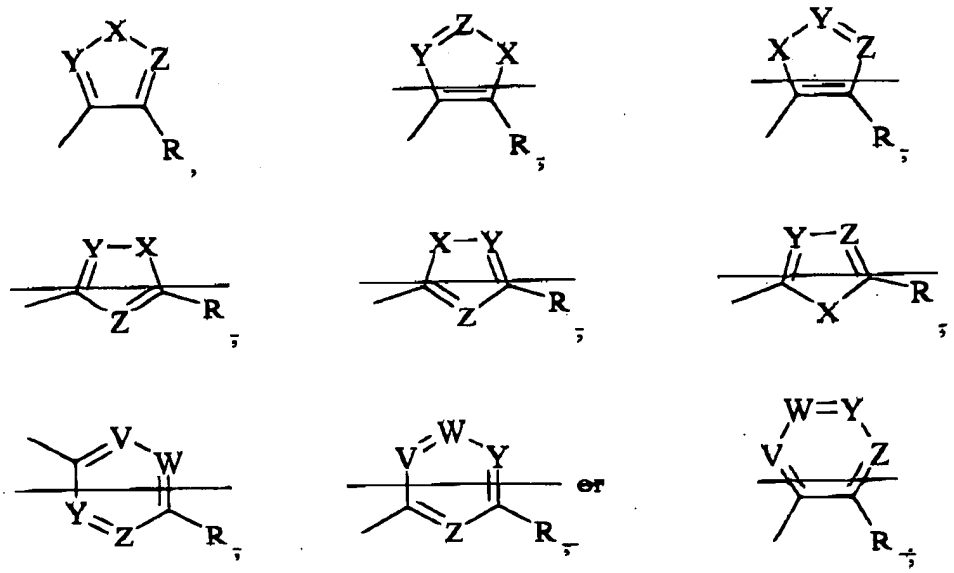
including and geometrical isomers, enantiomers, diastereomers, racemates, acid addition salts, salts thereof with a pharmaceutically acceptable acid, and prodrugs thereof, wherein Q is



X is ~~CH_2, NH, O or~~ S;

~~V, W,~~ Y and Z ~~independently~~ are ~~CH or~~ N;

n and m ~~independently~~ are ~~0, 1, 2, 3 or 4~~;

R^1 and R^2 are at any position on the azacyclic ring, including the point of attachment of the heterocycle Q, and independently are hydrogen, -OH, halogen, $-NH_2$, carboxy, straight or branched C_{1-10}-alkyl, C_{1-10}-alkenyl, or C_{1-10}-alkynyl, straight or branched C_{1-10}-alkoxy, or straight or branched C_{1-10}-alkyl substituted with –OH, -CN, -CHO, -OH, $-OR^3$, $-SR^3$, $-NH_2$, $-NHR^3$, $-NR^3R^4$, $-NO_2$, $-SOR^3$, $-SO_2R^3$, $-COR^3$, $-CO_2R^3$, $-CONH_2$, $-CONHR^3$, $-CONR^3R^4$, or $-CH{=}NOR^3$; or

R^1 and R^2 independently are phenyl, phenoxy, benzoyl, benzyl or benzyloxycarbonyl, each of which are unsubstituted or substituted with halogen, -CN, C_{1-10}-alkyl, C_{1-10}-alkoxy, or C_{1-10}-alkylthio;

R is hydrogen, halogen, -CN, -CHO, -OH, $-OR^3$, $-SR^3$, $-NH_2$, $-NHR^3$, $-NR^3R^4$, $-NO_2$, $-SOR^3$, $-SO_2R^3$, $-COR^3$, $-CO_2R^3$, $-CONH_2$, $-CONHR^3$, $-CONR^3R^4$, or $-CH=NOR^3$; or

R is phenyl, phenoxy, benzoyl, benzyl or benzyloxycarbonyl, each of which are unsubstituted or substituted with halogen, -CN, C_{1-15}-alkyl, C_{1-10}-alkoxy, or C_{1-10}-alkylthio; or

R is a 5 or 6 membered saturated, partly saturated or aromatic heterocyclic ring containing one to three heteroatoms; and

R^3 and R^4 independently are straight, branched, or cyclic C_{1-15}-alkyl, C_{2-15}-alkenyl, C_{2-15}-alkynyl, or combinations thereof, or R^3 and R^4 independently are phenyl, phenoxy, benzoyl, benzyl or benzyloxycarbonyl groups, each of which are unsubstituted or substituted with H, halogen, -CN, C_{1-15}-alkyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, or aryl; or

R^3 and R^4 independently are 5 or 6 membered saturated, partly saturated or aromatic heterocyclic rings containing one to three heteroatoms; with

one or more additional analgesics.

A1 cont.

14. (withdrawn) A method of inducing analgesia according to claim 13, the method comprising administering an analgesia-inducing amount of a composition according to claim 1 to a mammal in need thereof.

15 (canceled) A composition according to claim 1 for use as a medicament.

16 (canceled) A composition according to claim 1 for use as an analgesic.

17. (canceled) Use of the composition according to claim 1 for the manufacture of a medicament for treatment of analgesia.